

Application No. 10/588661  
Responsive to the office action dated June 17, 2009

**REMARKS**

Favorable reconsideration of this application is requested in view of the following remarks.

Claim 1 has been amended to exclude the additional reducing charge from the composition as supported by the specification at page 2, lines 15-17 and examples 2, 6, and 11 in table 1 on page 10 and add  $\text{NH}_4\text{ClO}_4$  as the additional oxidizing charge as supported by the specification at page 4, lines 13-20. Accordingly, claims 6 and 7 have been canceled without prejudice. Claim 15 has been added as supported by previously presented claim 1 and the specification at page 2, lines 19-22. Claim 16 has been added as supported by the specification at page 3, lines 24-25 and example 5 in table 1 on page 10. Claims 1-5 and 8-14 have been amended editorially.

Claims 1-16 read on the elected species of example 5 in table 1 on page 10, which is particularly expressed in claim 16, or depend from a generic claim that reads on the elected species.

Claims 1-14 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki (U.S. Patent Application Publication No. 2002/0190510). Applicants respectfully traverse this rejection.

Yamazaki suggests inclusion of oxygen in a hybrid inflator (see para. [0023] on page 2) and discloses oxidizers such as strontium nitrate, potassium nitrate, ammonium nitrate, potassium perchlorate ( $\text{KClO}_4$ ), copper oxide, ferrous oxide, and basic copper nitrate, one or more of which may be included in a hybrid inflator (see para. [0035] on page 3). Yamazaki, however, fails to disclose a composition that includes ammonium perchlorate ( $\text{NH}_4\text{ClO}_4$ ) as the oxidizer as claim 1 requires.  $\text{NH}_4\text{ClO}_4$  has a strong oxidizing activity and provides a good gas yield, and because of the strong oxidizing activity,  $\text{NH}_4\text{ClO}_4$  allows an increase in the quantity of a reducing agent such as guanidine nitrate, which also provides a very good gas yield, in the pyrotechnic composition (see page 4, lines 24-35 of the specification). Thus, the presence of

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$\text{NH}_4\text{ClO}_4$  in the composition promotes ignition of the composition and automotive safety (see *id.*) In fact, examples 2, 5, 6, and 11 in table 2, which include  $\text{NH}_4\text{ClO}_4$ , show much lower oxygen balance and higher gas yields than example 8, which includes  $\text{KClO}_4$  (see examples 2, 5, 6, 8 and 11 in tables 1 and 2 on pages 10 and 12, respectively, of the specification). Further, Yamazaki discloses only one actual composition, which includes nitroguanidine, strontium nitrate, carboxymethyl cellulose, and Japanese acid clay, and the example includes no oxidizer in addition to strontium nitrate such as  $\text{NH}_4\text{ClO}_4$  as claim 1 recites, or even  $\text{KClO}_4$  or other oxidizer(s) listed in the reference (see para. [0084] on page 7). Thus, the much superior properties of the pyrotechnic gas-generating composition of claim 1 obtained by including  $\text{NH}_4\text{ClO}_4$  as an additional oxidizer, such as much lower oxygen balance and higher gas yield, to those obtained by the composition without  $\text{NH}_4\text{ClO}_4$  or those obtained by the composition including  $\text{KClO}_4$  instead of  $\text{NH}_4\text{ClO}_4$  are unexpected from the Yamazaki disclosure.

Accordingly, claim 1 and claims 2-5 and 8-16, which ultimately depend from claim 1, are distinguished from Yamazaki, and this rejection should be withdrawn.

Claim 7 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 7 has been canceled, and this rejection is moot and should be withdrawn.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.



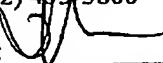
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Respectfully submitted,

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